Health Advice to Schools
for the Prevention of Coronavirus disease (COVID-19)

(Interim)

I. Disease Information

Please visit the following website for information on disease, affected areas and updates related to COVID-19:

The Department of Health advises schools to take the following precautionary measures to minimize the risk of contracting and spreading COVID-19 after class resumption.

II. General Preventive Measures

A. Maintain Good Personal Hygiene and Immunity

(a) Perform hand hygiene properly, especially before touching your eyes, nose or mouth; before eating; after using the toilet; and after touching public installations or equipment such as handrails or door knobs; or when hands are contaminated by respiratory secretion after coughing or sneezing.
(b) Wash hands with liquid soap and water properly whenever possibly contaminated.

(c) When hands are not visibly soiled, clean hands by rubbing them with 70-80% alcohol-based handrub as an effective alternative.

(d) Cover mouth and nose with tissue paper when sneezing or coughing. Dispose soiled tissue paper properly into a lidded rubbish bin and wash hands with liquid soap and water afterwards.

(e) If students/staff have fever, respiratory symptoms or sudden loss of taste or smell, they should refrain from attending class/work at school and seek medical advice promptly.

(f) Students/staff should wear a mask when taking public transport, staying in crowded places and while in school. It is important to wear a mask properly, including hand hygiene before wearing and after removing a mask. For safety reasons, mask-wearing is not recommended for children below age of 2 without supervision, people with difficulty breathing or people who need assistance to remove the mask.

(g) Do not share personal items such as eating utensils and towels.

(h) Build up good body immunity by having a balanced diet, regular exercise and adequate rest, do not smoke and avoid alcohol consumption.

(i) School should post up health education materials on hand hygiene, cough etiquette and COVID-19 in conspicuous sites to alert staff and students. Relevant health education materials can be downloaded from the Centre for Health Protection (CHP) website: https://www.chp.gov.hk/en/resources/464/102466.html

(j) If a student is a close contact or household member of a confirmed or preliminary confirmed case, the student must not attend school and should undergo quarantine and/or testing as instructed by the CHP.

(k) If a staff member (including driver and staff of school bus), other workers working in the school (e.g. repair workers, volunteer workers) or student is subject to compulsory testing, he/she must undergo testing as instructed and obtain a negative test result before attending school.

B. Preparation of Hand Hygiene Facilities

(a) Provide liquid soap and disposable paper towels at places where there are handwashing facilities, e.g. toilets, kitchens, tuck shops/ canteens, art rooms, activity rooms as indicated.

(b) Provide 70-80% alcohol-based handrub in places where handwashing facility is not available, e.g. at the school entrance.

C. Maintain Good Indoor Ventilation

(a) Open windows as appropriate for fresh air.

(b) Use of fans (e.g. wall, circulating or exhaust fan) in indoor spaces should be accompanied by means to increase outdoor air changes (e.g. opening windows or maximizing fresh air intake of air conditioners) at the same time. Minimize air blowing directly from one person (or group of people) to another.

(c) If the air-conditioning system is used, ensure there is sufficient fresh air supply.

(d) Keep air-conditioners well maintained. Clean the dust-filters of air-conditioners regularly.

(e) Ensure exhaust fan is located on the different side of / far from the air conditioners to prevent short circuit of airflow.

(f) Remove any obstruction to the ventilation inlets or outlets.

D. Water Dispenser

(a) Forbid use of drinking fountains during the COVID-19 pandemic because of risk of cross-contamination (e.g. container and mouth inadvertently contacting the nozzle/ protective guard).

(b) As an alternative, users are advised to use a container (e.g. cup or bottle) to collect water from bottle-filling water dispensers while observing proper personal hygiene.

(c) Do not use bottle-filling water dispensers to wash hands/ personal items.

(d) Water dispensers should be regularly cleaned and properly maintained.
E. Maintain Environment Clean and Hygienic

(a) Maintain good hygienic standard of the school premises through thorough cleaning and disinfection daily (please refer to Annex I for procedures of preparing and using diluted bleach). Keep classrooms, library, kitchens, canteens, toilets and bathrooms clean and hygienic by using 1 in 99 diluted household bleach (mixing 1 part of household bleach containing 5.25% sodium hypochlorite with 99 parts of water), leave for 15-30 minutes, and then rinse with water and wipe dry. For metallic surface, disinfect with 70% alcohol.

(b) Clean and disinfect frequently touched surfaces, furniture, toys, commonly shared items and floor at least twice daily by using 1 in 99 diluted household bleach (mixing 1 part of household bleach containing 5.25% sodium hypochlorite with 99 parts of water), leave for 15-30 minutes, rinse with water and wipe dry afterwards. For metallic surface, disinfect with 70% alcohol.

(c) If places are contaminated by respiratory secretions, vomitus or excreta, use strong absorbent disposable paper towels to wipe them away. Then disinfect the surface and the neighbouring area with 1 in 49 diluted household bleach (mixing 1 part of household bleach containing 5.25% sodium hypochlorite with 49 parts of water), leave for 15-30 minutes, rinse with water and wipe dry afterwards. For metallic surface, disinfect with 70% alcohol.

(d) Spraying disinfectants like diluted household bleach or alcohol is not recommended as spraying to body could be harmful and may not reduce the risk of viral transmission. (Annex III)

(e) Ensure waste is removed daily and disposed of safely.
F. Maintain Toilet, Changing Room and Shower Facilities Clean and Hygienic

(a) Keep toilets clean and dry.
(b) Clean and disinfect the environment at least daily.
(c) Cleaning and disinfect the shower cubicles at least every 4 hourly.
(d) Provide adequate hand washing facilities including liquid soap, disposable paper towels and lidded rubbish bins.
(e) Ensure the flushing system of the toilets are in proper function at all times.
(f) Close toilet lids when flushing.
(g) Pour about half a litre of water into each drain outlet once a week.
(h) Do not alter the drain and pipes without prior authorization.

https://www.chp.gov.hk/files/pdf/make_sure_the_trap_is_not_dry.pdf

G. Body Temperature Checking

(a) School should check temperature for students, staff and visitors upon entry to the school premises. This should be done at all times, i.e. during class suspension, school resumption, and when the school premises are used as examination venue or for any activities.
(b) Set up a station at the entrance with equipment for temperature check. Refer to Annex II for the reference range of body temperature measured by different methods.
(c) If infrared forehead thermometer is used as the primary means for temperature screening, take reference from the manufacturer for the normal range. The thermometer should be operated according to manufacturer’s instruction. It should be noted that infrared forehead thermometer may not provide reliable temperature readings. It is prudent to have a second means (e.g. infrared ear thermometer) for those with doubt on the first reading by infrared forehead thermometer.
(d) Equip 70-80% alcohol-based handrub and surgical masks at the station in case they are needed.
(e) Students with fever, respiratory symptoms or sudden loss of taste or smell should not be allowed to attend school. The sick student should wear a surgical mask. Parents or guardians should be informed so that they could bring the student to seek medical advice as soon as possible.

(f) Staff should also check their temperature before work every day. Those with fever, respiratory symptoms or sudden loss of taste or smell should refrain from work.

(g) Visitors with fever, respiratory symptoms or sudden loss of taste or smell should not be allowed to enter the school. They are advised to wear a surgical mask and seek medical advice promptly. Consider posting a notice at the entrance to inform people with fever, respiratory symptoms or sudden loss of taste or smell not to enter the school.

III. Precautions After Class Resumption

A. Administrative Measures

(a) Temperature screening of students, staff and visitors needs to be maintained.

(b) Wear a mask properly while in school premises as far as feasible.

(c) Perform hand hygiene whenever indicated.

(d) Consider staggering classes so that students come to school and leave school in batches, for example, in terms of grades. Avoid having large groups of students gathering at the entrances or exits of the school premises.

(e) Arrange students to use common areas such as library, chapel, music room, computer room, etc. in designated time slots to avoid large groups of students from various grades and classes mixing together.

(f) Avoid sharing of items such as musical instruments and if require, clean and disinfect between uses.

(g) To facilitate contact tracing when necessary, all visitors are encouraged to use the “LeaveHomeSafe” or to register their particulars (name, contact number, date, time of the visit). The list needs to be kept for 31 days following government’s advice.
B. Social Distancing

(a) Students should keep at least one metre apart while within the school campus including in classroom, queuing for toilets or at tuck shop.

(b) Avoid non-essential group activities. Consider using public announcement system where applicable.

(c) Where group activities are essential, ensure good ventilation of the venue. All attending students and staff should wear a mask. Maintain social distance at least one metre between students and arrange them to face the same direction if feasible.

C. Meal Arrangement

(a) Avoid mask off activities (e.g. having meals or snacks) in school as far as feasible.

(b) Consider stagger meal times to reduce the number of students gathering if having meals in school is deemed necessary.

(c) Maintain social distance during meals. Students should face one direction. Otherwise, effective partitions (of sufficient height e.g. above head level) may be installed on tables. Remind students not to talk while not wearing a mask.

(d) Perform hand hygiene before and after eating.

(e) Do not share food or drink, or utensils with others.

D. Physical Activities

(a) Encourage outdoor exercise as indoor exercise carries higher risk of disease transmission, especially for exercise with high intensity.

(b) Activities during which masks can be worn will be at lower risk compared to those cannot.

(c) Resumption of physical activities should start at small group in a non-contact fashion.

(d) Large group and contact sports should be only resumed after social distancing has been lifted.
(e) Games that involves a common object e.g. ball games can be played provided social distancing can be maintained and observation of hand hygiene as appropriate.

(f) Perform hand hygiene before and after the exercise.

(g) Avoid touching eyes, nose and mouth during exercise. If need to, perform hand hygiene before touching.

(h) Masks should be worn as far as feasible. If the mask cannot be tolerated, keep social distancing for at least 1.5 metres.

(i) Avoid sharing of sports equipment and disinfect after use.

(j) Avoid overcrowding in changing rooms and shower e.g. using half of the capacity or keeping at least 1.5 metres between users.

(k) No sharing of personal items.

(l) If students develop fever or respiratory symptoms, stop exercising, wear a surgical mask and seek medical attention as soon as possible.

E. Visitors

(a) School should check temperature for visitors and deny entry of those with fever, respiratory symptoms or sudden loss of taste or smell.

(b) All visitors need to wear a mask and perform hand hygiene before entering the school premises.

(c) School should consider cancelling mass gathering events or meetings that take place on school premises.

F. Points to Note when Holding Examinations

(a) Any student, teacher or staff member who are under compulsory quarantine should not enter the school premises.

(b) Students should be reminded to check body temperature at home and refrain from sitting the examination if they have fever, respiratory symptoms or sudden loss of taste or smell.
**Before the examination**

(c) Students should be reminded to wear a mask before coming to the examination venue.

(d) Provide alcohol-based handrub at the entrance. Students have to perform hand hygiene before entering the venue.

(e) Ensure good ventilation of the venue.

(f) Arrange seats so that the distance between students are kept at least one metre.

(g) Allow adequate staff and ample time to have all candidates screened and seated.

(h) Remind the students to keep the school premises clean, particularly when using the toilets.

**During the examination**

(i) Students and staff should have the mask on during the whole examination.

(j) Masks should be worn in oral examinations.

**During the break / After the examination**

(k) Students should continue to wear masks and avoid mask-off activities during breaks as far as feasible. Minimize mixing activities during break as far as feasible.

(l) Arrange students to leave in batches to avoid over-crowding in toilets, exits of halls or classrooms.

(m) Students should maintain social distance all the time.

(n) The examination venue should be thoroughly cleaned after each session.

**G. Recommendations for Tutorials or Extracurricular Activities**

(a) Restrict the size of a group to a small number, avoid mixing activities and sharing of learning tools among groups.

(b) All attending students and staff should wear a mask as far as feasible. If masks cannot be worn, a distance of at least 1.5 metres should be kept.
(c) Clean and disinfect the venue after each session. Use 1 in 99 diluted household bleach (mixing 1 part of household bleach containing 5.25% sodium hypochlorite with 99 parts of water), leave for 15-30 minutes, and then rinse with water and wipe dry. For metallic surface, disinfect with 70% alcohol.

H. Arrangements for School Vaccination Programme (including COVID-19 vaccination)

(a) Where applicable, students may be scheduled to have vaccination in school.

(b) They should be arranged in batches to receive vaccination separately.

(c) Temperature checking for students should be in place before entering the venue for vaccination.

(d) All attending students and staff should wear a mask and practice hand hygiene.

(e) All need to keep appropriate distancing (at least one metre apart) at waiting area, vaccination area, queue and other activities if any.

(f) The venue for vaccination should be kept well ventilated.

(g) The venue should be cleaned and disinfected with 1 in 99 diluted household bleach (mixing 1 part of household bleach containing 5.25% sodium hypochlorite with 99 parts of water), left for 15-30 minutes, and then rinsed with water and wiped dry. For metallic surface, disinfect with 70% alcohol. Environmental cleaning should be performed after each session.

I. Points to Note for Students or Staff under Quarantine and/ or Medical Surveillance

(a) Any person under compulsory quarantine for whatever reason should not leave the designated place of quarantine and should not enter the school premises.

(b) Students or staff under medical surveillance may attend school or work as usual provided all health advices are followed, i.e. checking temperature and observing for symptoms daily.
Parents or guardians should inform the school if the student is put under quarantine or medical surveillance.

Students or staff under medical surveillance should wear a surgical mask at all times and report to the school when they have fever, respiratory symptoms or sudden loss of taste or smell.

IV. Recommendations for Boarding Schools

A. Ensure a Clean and Hygiene Environment

On top of the general preventive measures in Section II, please note the followings:

(a) Establish a regular cleaning schedule. Pay special attention to frequently touched areas and items (e.g. doorknobs, elevator buttons).

(b) Encourage students to frequently clean their living quarters and keep the hostel clean.

(c) Ensure an adequate supply of surgical masks, gloves, alcohol-based handrub, household bleach and thermometers. Toilets should be equipped with adequate supply of liquid soap and disposable towels.

B. Maintain Close Communication between Students and Staff

(a) Remind students to put on a surgical mask and seek medical care if they have fever, respiratory symptoms or sudden loss of taste or smell.

(b) Request students and staff to notify the person in charge of the boarding section if they develop fever, respiratory symptoms or sudden loss of taste or smell, or have been admitted to hospitals.

C. Keep Sickness Records of Students and Staff and Notify Suspected Outbreaks Early

(a) Persons in charge of the boarding section should monitor any unusual increase in respiratory illness among students/staff.
(b) Inform students and parents that the information they provide may be passed on to CHP when necessary to facilitate outbreak investigation and implementation of control measures.

(c) Report to Central Notification Office (CENO) (Tel: 2477-2772; Fax: 2477-2770) for epidemiological investigation and outbreak control when an increase or unusual sickness pattern among students/ staff with the same infectious disease or similar symptoms is noticed.

(d) Suspend gathering activities if outbreak is suspected.

(e) Keep students and parents regularly updated on the outbreak situation.

D. Care for Sick Students in Boarding Section

(a) Provide surgical masks to students who have fever, respiratory symptoms or sudden loss of taste or smell and ask them to stay in their rooms.

(b) Keep the room with sick students well ventilated.

(c) Inform parents to bring sick students home and seek medical consultation if necessary.

(d) Perform environmental cleansing and disinfection of the room with 1 in 99 diluted household bleach (1 part of 5.25% household bleach in 99 parts water), wait until dry and rinse with water. If the room is contaminated with respiratory secretions, disinfect with 1 in 49 diluted household bleach (1 part of 5.25% household bleach in 49 parts water), leave for 15-30 minutes, and then rinse with water. For metallic surface, disinfect with 70% alcohol.

(e) For roommate(s) of the sick students, if they need to stay in the quarters (e.g. student from outside HK), personal hygiene should be reinforced and they are to be reminded to report to staff promptly if he/ she develops fever, respiratory symptoms or sudden loss of taste or smell.

(f) With consent, arrange designated staff to care for ill persons to limit the risk of cross infection. Staff can make contact by e-mail, text messaging, phone calls, or other methods with each student who is in self-isolation.

(g) Ensure staff taking care of the sick students adopt protective measures, which include performing hand hygiene and wearing a surgical mask. Staff should perform hand hygiene before and after contact with the
student, and wash hands immediately after contact with respiratory
secretions or contaminated environment.

(h) Any staff who develop fever, respiratory symptoms or sudden loss of taste
or smell after taking care of a sick student should refrain from work, wear
a surgical mask and seek medical advice.

E. Special Attention to Students with Physical and/or Intellectual
Disability

(a) Because of their impaired ability on self-care, students with physical and/
or intellectual disability are often at higher risk of contracting COVID-19
and transmitting the infection to others.

(b) Staff of the boarding section should be vigilant on their physical
conditions and watch out for fever and respiratory symptoms. Protective
measures should be adopted duly when managing disabled students with
such symptoms.

V. Early Recognition of Symptoms

(a) Actively check the body temperature of all students every day when they
arrive at school so as to identify students with fever. Those with fever,
respiratory symptoms or sudden loss of taste or smell should not be
allowed to attend school. They should be advised to wear surgical mask
and seek medical advice promptly.

(b) Staff should also check their temperature before work every day. Those
with fever, respiratory symptoms or sudden loss of taste or smell should
refrain from work.

(c) Contact the staff and parents or guardians of students to ascertain the
reasons for their absence.

(d) Keep sick leave records of staff and students properly. This helps early
detection of possible infections.
VI. When a Suspected/Confirmed Case of COVID-19 is Encountered in School

A. Contact tracing

(a) If a student or staff member is being informed to be a confirmed or preliminary confirmed case of COVID-19, students or staff members who are close contacts of the case should be separated from others while waiting for further arrangements from CHP. Close contacts will be put under quarantine and other contacts will be put under medical surveillance. Please refer to Section III (I) for points to note when students or staff are put under quarantine and/or medical surveillance.

B. Enhanced Environmental Disinfection

(a) Cleansing staff should wear appropriate Personal Protective Equipment (PPE) including:
- Surgical mask
- Latex gloves
- Disposable gown
- Eye protection (goggles/face shield) and cap (optional)

(b) Disinfect all potentially contaminated surfaces or items by using 1 in 49 diluted household bleach (mixing 1 part of household bleach containing 5.25% sodium hypochlorite with 49 parts of water), leave for 15-30 minutes, rinse with water and wipe dry afterwards.

C. If There is Blood, Secretions, Vomitus or Excreta Spillage, Take Enhanced Measures

(a) Cleaning staff should wear appropriate PPE including surgical mask, gloves, disposable gown, eye protection (goggles/face shield) and cap (optional).

(b) Use forceps to hold the strong absorbent disposable towels to wipe away the blood, secretions, vomitus or excreta during a preliminary clean up.
(c) Then put the forceps and used absorbent disposable towels in a garbage bag carefully without contaminating oneself/ the environment.

(d) Disinfect with 1 in 4 diluted household bleach (mixing 1 part of household bleach containing 5.25% sodium hypochlorite with 4 parts of water), wipe from the outside inward, leave for 10 minutes, rinse with water and wipe dry afterwards.

(e) After the procedure, put all the wastes and cleaning tools (e.g. forceps, cloth, mop head) in the garbage bag.

(f) Carefully remove PPE, put them in the garbage bag, and then perform hand hygiene.

(When hands are not visibly soiled, use 70-80% alcohol-based handrub. Wash hands with soap and water when hands are visibly dirty or visible soiled with blood, body fluid.)

(g) Wear a pair of new gloves, seal the waste bag tight and dispose it properly in covered rubbish bin. Then, label the rubbish bin and put it in a safe undisturbed place until collection.

(h) Remove gloves carefully. Wash hands with liquid soap and water.
VII. Guideline on Prevention of Communicable Diseases in Schools

Please refer to the “Guidelines on Prevention of Communicable Diseases in Schools/ Kindergartens/ Kindergartens-cum-Child Care Centres/ Child Care Centres” for more details.


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Annex I

The Use of Bleach

Bleach is a strong and effective disinfectant. Its active ingredient, sodium hypochlorite, denatures protein in micro-organisms and is therefore effective in killing bacteria, fungi and viruses. Household bleach works quickly and is widely available at a low cost. Diluted household bleach is thus recommended for the disinfection of environment.

As bleach irritates mucous membranes, the skin and the airway, decomposes under heat and light and reacts readily with other chemicals, bleach should be used with caution. Improper use of bleach may reduce its effectiveness in disinfection and can injure users. Overuse of bleach will pollute the environment and disturb ecological balance.

Tools and Equipment

Get all necessary tools and equipment ready, such as household bleach, measuring tools, containers and Personal Protective Equipment.

Preparing/ Using Diluted Bleach

(a) Dilute and use bleach in a well-ventilated area. Put on appropriate Personal Protective Equipment (e.g. mask, gloves, safety goggles and plastic apron) when diluting or using bleach as it irritates mucous membranes, the skin and the airway.

(b) Mix bleach with cold water as hot water decomposes the active ingredient of bleach and renders it ineffective.

(c) Bleach containing 5.25% sodium hypochlorite. Properly dilute the bleach to achieve appropriate concentration as follows:
   (i) 1:99 diluted household bleach (mixing 1 part of 5.25% bleach with 99 parts of water) is used for general household cleaning and disinfection.
   (ii) 1:49 diluted household bleach (mixing 1 part of 5.25% bleach with 49 parts of water) is used for surfaces or articles contaminated with vomitus, excreta and secretions.
   (iii) 1:4 diluted household bleach (mixing 1 part of 5.25% bleach with 4 parts of water) is used for surfaces or articles contaminated with vomitus, excreta and secretions.
(d) Make adjustments to the amount of bleach added if its concentration of sodium hypochlorite is above or below 5.25%.

(i) Calculation: Multiplier of the amount of bleach added = 5.25 concentration of sodium hypochlorite in bleach

(ii) For example, when diluting a bleach containing only 5% sodium hypochlorite, the multiplier is 5.25/ 5=1.05. That means 10ml x 1.05 =10.5ml of bleach should be used when preparing a bleach solution.

(e) Use a tablespoon or measuring cup for accurate measurement of the amount of bleach added.

(f) Wash hands thoroughly after the procedure.

**Precautions for the use of bleach**

(a) Avoid using bleach on metals, wool, nylon, silk, dyed fabric and painted surfaces.

(b) Avoid touching the eyes. If bleach gets into the eyes, immediately rinse with water for at least 15 minutes and consult a doctor.

(c) Do not use bleach together with other household detergents as this reduces its effectiveness in disinfection and causes dangerous chemical reactions. For example, a toxic gas is produced when bleach is mixed with acidic detergents such as those used for toilet cleaning. This can result in accidents and injuries. If necessary, use detergents first and rinse thoroughly with water before using bleach for disinfection.

(d) Undiluted bleach liberates a toxic gas when exposed to sunlight, thus store in a cool, shaded place and out of reach of children.

(e) Sodium hypochlorite decomposes with time. To ensure its effectiveness, purchase recently produced bleach and avoid over-stocking.

(f) For effective disinfection, use diluted bleach within 24 hours after preparation as decomposition increases with time if left unused.

(g) Organic materials inactivate bleach; clean surfaces so that they are clear of organic materials before disinfection with bleach.
Annex II

Monitoring of Body Temperature

Body temperature varies with age, time of day and level of physical activity. For screening purpose, temperature above the reference range quoted below is considered as significant and one should seek medical attention.

<table>
<thead>
<tr>
<th>Measuring method</th>
<th>Celsius scale (°C)</th>
<th>Fahrenheit scale (°F)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral</td>
<td>37.5</td>
<td>99.5</td>
</tr>
<tr>
<td>Tympanic</td>
<td>38</td>
<td>100.4</td>
</tr>
<tr>
<td>Armpit</td>
<td>37.3</td>
<td>99.1</td>
</tr>
</tbody>
</table>

Remarks: Read the instructions carefully for the reference range of the readings when using different methods of taking body temperatures.

For details, please refer to the “Guidance Note on Monitoring of Body Temperature” on the CHP website:
Annex III

Q&A on Spraying of Disinfectants

Q1: Is spraying of disinfectants on environmental surfaces in indoor spaces recommended?

A: In indoor spaces, routine application of disinfectants to environmental surfaces via spraying is generally not recommended because it is ineffective at removing contaminants outside of direct spray zones and can cause eye, respiratory, and skin irritation and other toxic effects. If disinfectants are to be applied, these should be via a cloth or wipe which is soaked in the disinfectant.

Q2: Is spraying of disinfectants on people recommended?

A: Spraying of people with disinfectants is not recommended under any circumstances. This practice could be physically and psychologically harmful and would not reduce an infected person’s ability to spread the virus through droplets or contact. Even if someone who is infected with COVID-19 goes through a disinfection tunnel or chamber, as soon as they start speaking, coughing or sneezing they can still spread the virus. The toxic effect of spraying with chemicals such as chlorine on individuals can lead to eye and skin irritation, bronchospasm due to inhalation, and potentially gastrointestinal effects such as nausea and vomiting.